

I claim:

1. A factory-settable optical subassembly for receiving a ferrule-held optical fiber, for use in an optical transceiver module, comprising:

an optoelectronic converter having an opening for passage of light;

a top can element attachable to the optoelectronic converter and having a first through hole and a second through hole, the first though hole and the second through hole being in communication with each other; and

a positioning element having a third through hole and the positioning element being received in the second through hole;

wherein the first through hole, the second through hole, the third through hole and the opening of the optoelectronic converter are arranged coaxially, and the positioning element can be moved along the axis of the second through hole and fixed in position such that, when the ferrule-held optical fiber is received through the first through hole and abuts against the positioning element, an end of the optical fiber will be at a proper focal distance from the optoelectronic converter to transmit a desired wavelength of light emitted by the optoelectronic converter at a maximum efficiency.

2. The optical subassembly of claim 1, wherein the optoelectronic converter comprises a laser device, a base, a plurality of conductive wire, and a housing, the laser device is secured with the base and the housing receives the laser device and lens.

3. The optical subassembly of claim 2, wherein the opening of the optoelectronic converter is defined through the housing.

4. The optical subassembly of claim 1, wherein the top can element further comprises a platform for engaging with an optical transceiver module.

5. The optical subassembly of claim 1, wherein an interior diameter of the second through hole is bigger than that of the first through hole.

6. The optical subassembly of claim 1, wherein the positioning element is in a cylindrical shape.
7. The optical subassembly of claim 6, wherein interior threads are defined on an inside wall of the second through hole, and complementary threads are defined on an outside wall of the positioning element.
8. The optical subassembly of claim 7, wherein a recess is defined at a bottom of the positioning element.
9. A factory-settable optical subassembly for use in an optical transceiver module, for coupling with a ferrule-held optical fiber, comprising:
  - an optoelectronic converter having a lens received therein for focusing light on an end portion of the optical fiber, and an opening for passage of light;
  - a top can element the top can element attachable to the optoelectronic converter and defining at least a first through hole;
  - a positioning element defining a second through hole; andwherein the positioning element is received in the first through hole of the top can element, and the ferrule-held optical fiber is inserted into the first through hole to abut against the positioning element such that the optical fiber, the first through hole of the top can element, the second through hole of the positioning element, and the opening of the optoelectronic converter are coaxial with the lens, and the positioning element is moved linearly in the first through hole to a desired position and is then secured therein, a distance between an end face of the optical fiber and the lens is such that a desired wavelength of light emitted by the optoelectronic converter is coupled into the optical fiber with maximum efficiency.
10. The optical subassembly of claim 9, wherein the optoelectronic converter additionally comprises a laser device, a base, a plurality of conductive wires and a housing, the laser device is secured with the base and the housing receives the laser device.

11. The optical subassembly of claim 10, wherein the opening of the optoelectronic converter is defined through the housing.
12. The optical subassembly of claim 9, wherein the top can element further comprises a flange for engaging with an optical transmitter module.
13. The optical subassembly of claim 9, wherein the positioning element is in a cylindrical shape.
14. The optical subassembly of claim 14, wherein interior threads are defined on an inside wall of the first through hole and complementary threads are defined on an outside wall of the positioning element.
15. The optical subassembly of claim 15, wherein the interior threads engage with the complementary threads.
16. The optical subassembly of claim 16, wherein a recess is defined at a bottom of the positioning element.
17. An optical assembly comprising:
  - an optoelectronic converter having an opening for passage of light;
  - a top can element attached to the converter;
  - a positioning element initially moveable along an axial direction in the top can, and successively secured to the top can after achieving a proper axial position thereof; and
  - a ferrule-held optical fiber element including an end face abutting against one side of the positioning element and a cylindrical body snugly received in the top can; wherein
  - said positioning element defines a through hole to communicate said ferrule-held optical fiber element, along said axial direction, to said passage which is located on the other side of said positioning element.